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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,334	06/27/2001	Qing Ma	42390P10606	6477

8791 7590 08/14/2002

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EXAMINER

COLEMAN, WILLIAM D

ART UNIT	PAPER NUMBER
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2823

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,334

Applicant(s)

MA ET AL.

Examiner

W. David Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-13, drawn to method of manufacturing a semiconductor device, classified in class 438, subclass 52.
 - II. Claims 14-17, drawn to semiconductor device, classified in class 257, subclass 333.185.
2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product. For instance, a filter can be made with the claimed process.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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5. During a telephone conversation with William Thomas Babbitt on Thursday August 7, 2002 a provisional election was made without traverse to prosecute the invention of group I invention, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Ghezzi et al., U.S. Patent 6,127,812.

9. Pertaining to claim 1, Ghezzi discloses a semiconductor process as claimed. See **FIGS. 11-12**, where Ghezzi teaches a method comprising:

over an area of a substrate **214**, forming a plurality of three dimensional first structures; following forming the first structures **32**, conformally introducing a sacrificial material **224** over

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the area of the substrate; introducing a second structural material **34** over the sacrificial material; and removing the sacrificial material.

10. Pertaining to claim 2, Ghezze discloses the method of claim 1, prior to removing the sacrificial material, further comprising exposing a portion of the sacrificial material.

11. Pertaining to claim 3, Ghezze discloses the method of claim 2, wherein exposing a portion of the sacrificial material comprises removing a portion of the second structural material.

12. Pertaining to claim 4, Ghezze discloses the method of claim 1, prior to introducing the second structural material, further comprising patterning the sacrificial material.

13. Pertaining to claim 5, Ghezze discloses the method of claim 1, wherein the first structural material comprises silicon and the sacrificial material comprises silicon dioxide and introducing the sacrificial material comprises growing.

14. Pertaining to claim 6, Ghezze discloses the method of claim 1, wherein removing the sacrificial material comprises suspending the second structural material as a second structure coupled to the first structures.

15. Pertaining to claim 7, Ghezze discloses the method of claim 1, wherein patterning the first structures defines a plurality of first areas of the portion of the substrate occupied by the first structures and at least a second area of the portion of the substrate free of the first structures, and introducing the sacrificial material comprises introducing the sacrificial material at least over the second area.

16. Pertaining to claim 8, Ghezze discloses a method comprising: over an area of a surface of a substrate, lithographically patterning a plurality of first structures, the plurality of first structures having a first dimension about the surface of the substrate and a second different

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dimension; following forming the first structures, conformally introducing a sacrificial material layer over the area of the substrate; forming second structures over the sacrificial material; and removing the sacrificial material.

17. Pertaining to claim 9, Ghezze discloses the method of claim 8, prior to forming second structures, further comprising patterning the sacrificial material.

18. Pertaining to claim 10, Ghezze discloses the method of claim 8, prior to removing the sacrificial material, further comprising exposing a portion of the sacrificial material.

19. Pertaining to claim 11, Ghezze discloses the method of claim 9, wherein exposing a portion of the sacrificial material comprises removing a portion of the second structural material.

20. Pertaining to claim 12, Ghezze discloses the method of claim 8, wherein the sacrificial material comprises silicon dioxide and introducing the sacrificial material comprises growing.

21. Pertaining to claim 13, Ghezze discloses the method of claim 8, wherein removing the sacrificial material comprises suspending the second structures by the first structures.

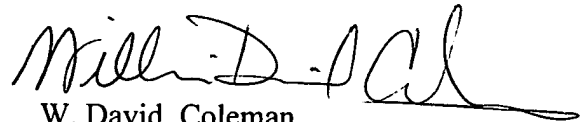
Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. David Coleman whose telephone number is 703-305-0004. The examiner can normally be reached on 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on 703-308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read "W. David Coleman". The signature is fluid and cursive, with a long horizontal stroke at the end.

W. David Coleman
Examiner
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WDC
August 10, 2002